

flipping said panel using a field generated by applying a voltage to a flipping electrode, wherein said vibration is effected by suitable electrifying of a piezoelectric material coupled to said panel.

70. (Amended) A device according to claim 68, wherein said stiction countering electrode interferes with said force providing element.

REMARKS

The present application is a US National application of PCT/IL99/00488. The present amendments, based on claim pages 47-48 and 50-53 as originally filed and claim pages 49 and 54-55 as attached to the IPER, have been made to place the application in proper US form. As indicated in the IPER, issued by the USPTO, acting for WIPO, all of the claims are patentable.

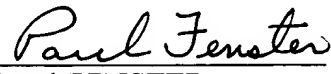
The application contains claims 1-70. Claims 6, 13-18, 21, 23, 24, 26, 29, 30, 32, 35-40, 44, 47, 55, 60, 65, 67 and 70 have been amended to reduce the number of claims by canceling multiple dependencies and to correct certain obvious errors and objections by the Examiner.

A marked-up version of the amendments is attached.

This application is very closely related to US Patent application 09/623,592, which is the US national filing of PCT/IL99/00130. In fact, the first claim in both that application and the present application are identical. Applicants are aware that this may cause some double patenting problems for which they suggest the following solution: Cancel claims 1 and 32 and change the dependency of claims 2, 7, 26, and 30 from claim 1 to claim 31. In the first office action, the Examiner is respectfully requested to indicate whether this change is acceptable and will overcome a statutory double patenting rejection.

An action on the merits is respectfully awaited.

Respectfully submitted,
Amichai HEINES, et al.


Paul FENSTER
Reg. No. 33,877

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William H. Dippert, Esq.
c/o Cowan, Liebowitz and Latman, P.C.
1133 Avenue of the Americas
New York, NY 10036-6799

Tel: (212) 790-9200

Marked-up version of amendments:

IN THE SPECIFICATION

RELATED APPLICATIONS

The present application is a U.S. national application of PCT/IL99/00488, filed September 8, 1999, which is [This application is] a continuation-in-part of PCT application serial number PCT/IL99/00130 (now U.S. patent application 09/623,592) [, which designates the US], the disclosure of which is incorporated herein by reference.

IN THE CLAIMS

6.(Amended) A display according to [any of claims 2-5] claim 2, wherein said angle is under 270°.

13.(Amended) A display according to [any of claims 9-12] claim 9, wherein said panel contacts both said nub and said region.

14.(Amended) A display according to [any of claims 9-12] claim 9, wherein said nub has a tip having a cross-section smaller than another cross-section of said nub.

15.(Amended) A display according to [any of claims 9-12] claim 9, wherein said nub has a rounded tip.

16.(Amended) A display according to [any of claims 9-12] claim 9, wherein said nub has a pitted tip.

17.(Amended) A display according to [any of claims 9-12] claim 9, wherein said nub has a roughened tip.

18.(Amended) A display according to [any of claims 9-12] claim 9, wherein said nub is coated with a stiction reducing coating.

21.(Amended) A display according to [any of claims 9-12] claim 9, comprising a vibration source underlying said nub.

23.(Amended) A display according to [any of claims 9-12] claim 9, comprising a vibration source underlying said hinge.

24.(Amended) A display according to claim [22]23, wherein said vibration source comprises a piezoelectric material.

26.(Amended) A display according to [any of claims 1-5, 7-12 or 24] claim 1, comprising a layer of insulating material between said plane and said first region.

29.(Amended) A display according to [any of claims 25, 27 or 28]claim 25, wherein said material comprises Silicon Nitride.

30.(Amended) A display according to [any of claims 1-5, 7-12, 24, 25, 27, or 28] claim 1, wherein said pixel is manufactured using Aluminum on Glass technology.

32.(Amended) A display according to [any of claims 1-5, 7-12, 24, 25, 27, or 28] claim 1, wherein said pixel comprises at least one flipping electrode for flipping said panel between said two positions.

35.(Amended) A display according to [claim 31 or] claim 33, wherein said at least one levitation electrode inhibits said flipping.

36.(Amended) A display according to [claim 31 or] claim 33, wherein said at least one levitation electrode protrudes above said first region.

37.(Amended) A display according to [claim 31 or] claim 33, wherein a same levitation electrode aids flipping both back and forth.

38.(Amended) A display according to [claim 31 or] claim 33, wherein said at least one levitation electrode is shared between at least two of said pixels.

39.(Amended) A display according to [claim 31 or] claim 33, wherein said at least one levitation electrode comprises at least two levitation electrodes each one associated with a different pixel and electrified together.

40.(Amended) A display according to [claim 31 or] claim 33, comprising circuitry for electrifying said at least one levitation electrode in synchrony with the flipping of a particular pixel.

44.(Amended) A display according to [any of claims 1-5, 7-12, 24, 25, 27, 28, 31 or 33] claim 31, wherein said panel comprises at least one spring attached thereto, which spring couples said panel and said first region when said panel is at said first position.

47.(Amended) A display according to [any of claims 1-5, 7-12, 24, 25, 27, 28, 31, 33 or 43] claim 31, comprising at least one vibration source.

55.(Amended) A display according to [any of claims 1-5, 7-12, 24, 25, 27, 28, 31, 33, 43, 45, 46 or 48-53] claim 31, comprising a touch-sensitive input.

60.(Amended) A display according to [any of claims 1-5, 7-12, 24, 25, 27, 28, 31, 33, 43, 45, 46, 48-53 or 56-59] claim 31, wherein said panel is flipped between said positions by the application of electric voltages to electrodes associated with the pixel and comprising at least one transistor associated with the pixel and deposited under said pixel for controlling said application.

65.(Amended) A display according to [any of claims 59 or 61-64] claim 59, wherein said transistor functions as a switch.

67.(Amended) A method of flipping a panel in a pixel using electrostatic forces, comprising:

counteracting stiction between said panel and a surface by vibrating said panel relative to said surface; and

flipping said panel using a [filed] field generated by applying a voltage to a flipping electrode,

wherein said vibration is effected by suitable electrifying of a piezoelectric material coupled to said panel.

70.(Amended) A device according to claim 68 [or claim 69], wherein said stiction countering electrode interferes with said force providing element.